Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-13. (Canceled)

14. (Currently amended) A method to determine outcome of a human subject having ER+ (estrogen receptor positive) breast cancer if treated with an ~~antiestrogen agent~~ aromatase inhibitor against breast cancer, ~~or of a human subject afflicted with breast cancer and treated with an antiestrogen agent against breast cancer,~~ said method comprising:

producing cDNA copies of HoxB13 and IL17BR mRNA from a sample of ER+ (estrogen receptor positive) breast cancer cells from said human subject,

determining a ratio of HoxB13 to IL17BR mRNA expression levels based on said cDNA copies, and

~~wherein a ratio of HoxB13 and IL17BR RNA expression levels, based on said cDNA copies, that is below the~~

determining the ratio as higher than a mean (average) ratio of HoxB13 and IL17BR RNA expression levels in ER+ breast cancer cells and as indicating ~~indicates a cancer free outcome, and~~

~~a ratio above the mean (average) ratio of HoxB13 and IL17BR RNA expression levels, based on said cDNA copies, in ER+ breast cancer cells indicates~~ an outcome comprising cancer ~~recurrence~~ that is non-responsive to said aromatase inhibitor;

wherein said mean (average) ratio of HoxB13 and IL17BR RNA expression levels is determined from [[the]] a mean (average) of HoxB13 mRNA expression levels, and [[the]] a mean (average) of IL17BR mRNA expression levels, in ER+ breast cancer cell samples from human breast cancer subjects that responded to treatment with said ~~antiestrogen agent~~ aromatase inhibitor against breast cancer and from human breast cancer subjects that [[do]] did not respond to treatment with said ~~antiestrogen agent~~ aromatase inhibitor.

15. (canceled)

16. (Currently amended) The method of claim 14 wherein said ~~antiestrogen agent against breast cancer is selected from a selective estrogen receptor modulator (SERM), selective estrogen receptor downregulator (SERD), or~~ aromatase inhibitor (AI) is a non-steroidal agent.

17. (canceled)

18. (Previously presented) The method of claim 14 wherein said cDNA copies of HoxB13 and IL17BR RNA are used for RNA amplification from said sample of breast cancer cells.

19. (Previously presented) The method of claim 14 wherein said cDNA copies of HoxB13 and IL17BR RNA are used in quantitative PCR.

20. (Previously presented) The method of claim 19 wherein said quantitative PCR is real-time PCR and said ratio of HoxB13 and IL17BR RNA expression levels is expressed as a ΔC_t of the C_t values for HoxB13 and IL17BR RNA expression levels.

21. (Previously presented) The method of claim 14 wherein said sample is a formalin fixed paraffin embedded (FFPE) sample.

22. (Original) The method of claim 14 wherein said sample is obtained by a minimally invasive technique or selected from core biopsy, excisional biopsy, a ductal lavage sample, a fine needle aspiration sample, or cells microdissected from said sample.

23. (Currently amended) A method to predict an expected ~~response or~~ lack of response to treatment with an ~~antiestrogen agent~~ aromatase inhibitor against breast cancer in a human ER+ (estrogen receptor positive) breast cancer patient, said method comprising

~~determining an expected non-response to treatment with an antiestrogen agent against breast cancer for said patient by~~ producing cDNA copies of HoxB13 and IL17BR mRNA from a sample of ER+ (estrogen receptor positive) breast cancer cells from said patient, [[and]]

determining~~, based on said cDNA copies,~~ a ratio of HoxB13 and IL17BR RNA expression levels based on said cDNA copies, and

determining the ratio as ~~that is~~ higher than [[the]] a mean (average) ratio of HoxB13 and IL17BR RNA expression in ER+ breast cancer cells and as indicating said cancer as expected to lack response to treatment with said aromatase inhibitor; ~~and/or~~

~~determining an expected response to treatment with said antiestrogen agent against breast cancer for said patient by producing cDNA copies of mRNA from a sample of breast cancer cells from said patient and determining, based on said cDNA copies, a ratio of HoxB13 and IL17BR RNA expression levels that is lower than the mean (average) ratio of HoxB13 and IL17BR expression in ER+ breast cancer cells~~

wherein said mean (average) ratio of HoxB13 and IL17BR RNA expression levels is determined from [[the]] a mean (average) of HoxB13 mRNA expression levels, and [[the]] a mean (average) of IL17BR mRNA expression levels, in ER+ breast cancer cell samples from human breast cancer subjects that responded to treatment with said ~~antiestrogen agent~~ aromatase inhibitor against breast cancer and from human breast cancer subjects that [[do]] did not respond to treatment with said ~~antiestrogen agent~~ aromatase inhibitor.

24. (canceled)

25. Currently amended) The method of claim 24 wherein said ~~antiestrogen agent against breast cancer is selected from a selective estrogen receptor modulator (SERM), selective estrogen receptor downregulator (SERD), or~~ aromatase inhibitor (AI) is a non-steroidal agent.

26. (canceled)

27. (Previously presented) The method of claim 24 wherein said cDNA copies of HoxB13 and IL17BR RNA are used for RNA amplification from said sample of breast cancer cells.

28. (Previously presented) The method of claim 24 wherein said cDNA copies of HoxB13 and IL17BR RNA are used in quantitative PCR.

29. (Previously presented) The method of claim 28 wherein said quantitative PCR is real-time PCR and said ratio of HoxB13 and IL17BR RNA expression levels is expressed as a ΔC_t of the C_t values for HoxB13 and IL17BR RNA expression levels.

30. (Previously presented) The method of claim 24 wherein said sample is a formalin fixed paraffin embedded (FFPE) sample.

31. (Original) The method of claim 24 wherein said sample is obtained by a minimally invasive technique or selected from core biopsy, excisional biopsy, a ductal lavage sample, a fine needle aspiration sample, or cells microdissected from said sample.

32-51. (canceled)

52. (Currently amended) The method of claim 14 wherein said ~~assaying comprises detecting expression of~~ cDNA copies comprise a HoxB13 sequence selected from SEQ ID NOS: 6, 7, 10, 11-31, 35 or 37.

53. (Previously presented) The method of claim 14 wherein said ~~assaying comprises detecting expression of~~ cDNA copies comprise an IL17BR sequence selected from SEQ ID NOs: 1, 2, 3, or 8, or 32-34.

54. (Previously presented) The method of claim 23 wherein said ~~assaying comprises detecting expression of~~ cDNA copies comprise a HoxB13 sequence selected from SEQ ID NOS: 6, 7, 10, 11-31, 35 or 37.

55. (Previously presented) The method of claim 23 wherein said ~~assaying comprises detecting expression of~~ cDNA copies comprise an IL17BR sequence selected from SEQ ID NOs: 1, 2, 3, or 8, or 32-34.

56-61. (canceled)

62. (Currently amended) The method of claim 14 wherein said ~~assaying is by~~ determining a ratio of HoxB13 to IL17BR mRNA expression levels based on cDNA copies comprises hybridization of said cDNA copies to a polynucleotide comprising sequences of at least 15 nucleotides from the 3' untranslated region, the coding region, or the 5' untranslated region of human HoxB13 or IL17BR sequences.

63. (Currently amended) The method of claim 23 wherein said ~~assaying is by~~ determining a ratio of HoxB13 and IL17BR RNA expression levels based on said cDNA copies comprises hybridization of said cDNA copies to a polynucleotide comprising sequences of at least 15 nucleotides from the 3' untranslated region, the coding region, or the 5' untranslated region of human HoxB13 or IL17BR sequences.

64-68. (canceled)

69. (Currently amended) The method of claim 25 wherein said non-steroidal agent is selected from anastrozole, letrozole, and vorozole ~~29 wherein said antiestrogen agent is tamoxifen~~.

70. (canceled)

71. (New) The method of claim 69 wherein said non-steroidal agent is letrozole.

72. (New) The method of claim 16 wherein said non-steroidal agent is selected from anastrozole, letrozole, and vorozole.

73. (New) The method of claim 72 wherein said non-steroidal agent is letrozole.